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(54) MULTI-THREAD PROCESSOR

(57)Abstract:

PROBLEM TO BE SOLVED: To make available a hardware scheduling function and a software scheduling function both.

SOLUTION: Thread execution units 10-0 to 10-3 have machine-word instruction, which enable a thread in process to generate a new thread and a thread in process to end. Furthermore, the processor is equipped with a function of directly assigning the new thread by hardware, a function of instructing whether or not the assignment by the hardware is performed by the hardware, a function of holding the register context of a thread generated, when the assignment by the hardware is not performed, and a function of restoring the held register context on the thread execution units 10-0 to 10-3, when the thread in process ends; and the thread execution units 10-0 to 10-3 process the new thread generated by the thread in process by themselves as need after the thread ends in processing.

